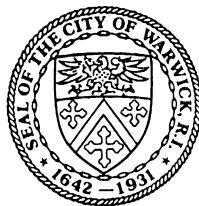


Patricia A. Peshka
Purchasing Agent



Scott Avedisian
Mayor

City of Warwick
Purchasing Division
3275 Post Road
Warwick, Rhode Island 02886
Tel (401) 738-2000 Ext. 6240
Fax (401) 737-2364

The following notice is to appear on the City of Warwick's website Thursday, November 3, 2016. The website address is <http://www.warwickri.gov/bids>.

**CITY OF WARWICK
BIDS REQUESTED FOR**

Bid2017-171 Purchase (1) Rear Loading Sanitation Vehicle

Specifications are available in the Purchasing Division, Warwick City Hall, Monday through Friday, 8:30 AM until 4:30 PM on or after Thursday, November 3, 2016.

Sealed bids will be received by the Purchasing Division, Warwick City Hall, 3275 Post Road, Warwick, Rhode Island 02886 up until 11:00 AM, Monday, November 14, 2016. The bids will be opened publicly commencing at 11:00 AM on the same day in the Lower Level Conference Room, Warwick City Hall.

Awards shall be made on the basis of the lowest evaluated or responsive bid price. Please note that no bids can be accepted via email or fax.

Individuals requesting interpreter services for the hearing impaired must notify the Purchasing Division at 401-738-2000, extension 6241 at least 48 hours in advance of the bid opening date.

Original Signature on File

Patricia A. Peshka
Purchasing Agent

PLEASE SUBMIT THIS PAGE WITH YOUR BID

Acknowledgement of Addendum (if applicable)

| Addendum Number | Signature of Bidder |
|------------------------|----------------------------|
| _____ | _____ |
| _____ | _____ |

COMPANY NAME: _____

COMPANY ADDRESS: _____

COMPANY ADDRESS: _____

BIDDER'S SIGNATURE: _____

BIDDER'S NAME (PRINT): _____

TITLE: _____ TEL. NO.: _____

EMAIL ADDRESS: _____ *

*Please include your email address. Future bids will be emailed, unless otherwise noted.

=====

II. AWARD AND CONTRACT:

The CITY OF WARWICK, acting as duly authorized through its Purchasing Agent/Finance Director/Mayor (delete if inapplicable), accepts the above bid and hereby enters into a contract with the above party to pay the bid price upon completion of the project or receipt of the goods unless another payment schedule is contained in the specifications. All terms of the specifications, both substantive and procedural, are made terms of this contract.

| | |
|---------------------------------|------------------|
| DATE: _____ | _____ |
| Bid2017-171 Purchase (1) | Purchasing Agent |
| Rear Loading Sanitation Vehicle | |

CERTIFICATION & WARRANT FORM*

**This form must be completed and submitted with sealed bid.
Failure to do so will result in automatic rejection.**

Any and all bids shall contain a certification and warrant that they comply with all relevant and pertinent statutes, laws, ordinances and regulations, in particular, but not limited to Chapter 16- Conflicts of Interest, of the Code of Ordinances of the City of Warwick. Any proven violation of this warranty and representation by a bidder at the time of the bid or during the course of the contract, included, but not limited to negligent acts, either directly or indirectly through agents and/or sub-contractors, shall render the bidder's contract terminated and the bidder shall be required to reimburse the City for any and all costs incurred by the City, including reasonable attorney fees, to prosecute and/or enforce this provision.

Signature

Date

Company Name

Address

Address

***This form cannot be altered in any way**

**CITY OF WARWICK
NOTICE TO BIDDERS**

Bid2017-171 Purchase (1) Rear Loading Sanitation Vehicle

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If you received this document from our homepage or from a source other than the City of Warwick Purchasing Division, please check with our office prior to submitting your bid to ensure that you have a complete package. The Purchasing Division cannot be responsible to provide addenda if we do not have you on record as a plan holder.

Bids received prior to the time of the opening will be securely kept, unopened. No responsibility will be attached to an officer or person for the premature opening of a bid not properly addressed and identified. No bids shall be accepted via facsimile or email.

The opening of bids shall be in the order established by the posted agenda and the agenda shall continue uninterrupted until completion.

Once an item has been reached and any bids on that item has been opened, no other bids on that item will be accepted and any such bid shall be deemed late.

The contractor will not discriminate against any employee or applicant for employment because of physical or mental handicap for any position for which the employee or applicant is qualified and that in the event of non-compliance the City may declare the contractor in breach and take any necessary legal recourse including termination or cancellation of the contract.

A bidder filing a bid thereby certifies that no officer, agent, or employee of the City has a pecuniary interest in the bid or has participated in contract negotiations on the part of the City, that the bid is made in good faith without fraud, collusion, or connection of any kind with any other bidder for the same call for bids, and that the bidder is competing solely in his own behalf without connection with, or obligation to, any undisclosed person or firm.

All bids should be submitted with one (1) original and one (1) copy in a sealed envelope, which should read: *YOUR COMPANY NAME* plainly marked on the exterior of the envelope as well as "Bid2017-171 Purchase (1) Rear Loading Sanitation Vehicle."

Should you have any questions, please contact Brian Steinkamp, 925 Sandy Lane, Warwick, RI at 401-738-2000, extension 6506.

All bids should be written in ink or typed. If there is a correction with whiteout, the bidder must initial the change.

Any deviation from the specifications must be noted in writing and attached as part of the bid proposal. The bidder shall indicate the item or part with the deviation and indicate how the bid will deviate from specifications.

The IRS Form W-9 attached should be completed and submitted with the bid if the bidder falls under IRS requirements to file this form.

Prices to be held firm one year from date of award. Term contracts may be extended for one additional term upon mutual agreement unless otherwise stated.

When a bid is awarded to a corporation, limited liability company or other legal entity, prior to commencing work under the awarded bid, that corporation, company or legal entity may be required to provide to the Purchasing Agent a Certificate of Good Standing from **The Rhode Island Secretary of State** dated no more than thirty (30) days prior to the date upon which the bid award was made. **Please note that no other State's Certificate of Good Standing will be accepted.**

Certificates may be mailed to City of Warwick, Purchasing Division, 3275 Post Rd., Warwick, RI 02886 or emailed to bids@warwickri.com. Please reference the bid number in your response.

The successful bidder will provide said State of Rhode Island's Certificate of Good Standing within ten (10) calendar days after notification of award or the City reserves the right to rescind said award.

The City is exempt from the payment of the Rhode Island Sales Tax under the 1956 General Laws of the State of Rhode Island, 44-18-30, Paragraph I, as amended.

The contractor must carry sufficient liability insurance and agree to indemnify the city against all claims of any nature, which might arise as a result of his operations or conduct of work.

The Purchasing Agent reserves the right to reject any and all bids, to waive any minor deviations or informalities in the bids received, and to accept the bid deemed most favorable to the interest of the City.

The City reserves the right to terminate the contract or any part of the contract in the best interests of the City, upon 30-day notice to the contractor. The City shall incur no liability for materials or services not yet ordered if it terminates in the best interests of the City. If the City terminates in the interests of the City after an order for materials or services have been placed, the contractor shall be entitled to compensation upon submission of invoices and proper proof of claim, in that proportion which its services

and products were satisfactorily rendered or provided, as well as expenses necessarily incurred in the performance of work up to time of termination.

No extra charges for delivery, handling or other services will be honored. All claims for damage in transit shall be the responsibility of the successful bidder. Deliveries must be made during normal working hours unless otherwise agreed upon.

All costs directly or indirectly related to the preparation of a response to this solicitation, or any presentation or communication to supplement and/or clarify any response to this solicitation which may be required or requested by the City of Warwick shall be the sole responsibility of and shall be borne by the respondent.

If the respondent is awarded a contract in accordance with this solicitation and the respondents bid or response and if the respondent fails or refuses to satisfy fully all of the respondents obligations thereunder, the City of Warwick shall be entitled to recover from the respondent any losses, damages or costs incurred by the City as a result of such failure or refusal.

The City reserves the right to award in part or full and to increase or decrease quantities in the best interest of the City.

Any quantity reference in the bid specifications are estimates only, and do not represent a commitment on the part of the City of Warwick to any level of billing activity. It is understood and agreed that the agreement shall cover the actual quantities ordered during the contract period.

The City reserves the right to rescind award for non-compliance to bid specifications.

The successful bidder must adhere to all City, State and Federal Laws, where applicable.

**CITY OF WARWICK
PURCHASE OF ONE (1) 2016 OR NEWER
HIGH COMPACTION REAR LOADER SANITATION VEHICLE**

FRAME AND EQUIPMENT

- 10 ¾" steel rails 355-384"
 - 10.75 x 3.5 x .375 dimension, 2,136,000 RBM
- Full steel inner liner
- Three-piece crossmembers

- EOF Square without Xmbr
 - For use with body builder installed crossmember
- Omit rear mud flaps and hangers

FRONT AXLE AND EQUIPMENT

- Dana Spicer D2000F 20,000 lb, 3.5" drop
 - Factory front axle alignment to improve handling and reduce tire wear
 - Zerk fittings on tie rod ends, king pins and draglink ball joints for ease of maintenance and help extend service life of components
 - Cognis EMGUARD FE 75W-90 synthetic axle lube resulting in increased uptime for components in extreme cold conditions and withstand the stress from high temperatures, extending component life
- Taper leaf springs, shocks 20,000 lb, with heavy resistance shocks
- Power steering TRW THP60 dual
 - Glidekote splines on steering shaft extend service life of components
- PHP 10 Aluminum Preset PLUS Hubs
 - 11 ¼" bolt circle
 - Includes supplier extended coverage up to 3 years/350,000 miles for bearings and seals
- Power steering reservoir frame mounted with cooler
- Gusseted cam brackets, steer axle

- Bendix Air Cam Front Drum Brakes 16.5 x 6
 - For use with 20,000 lbs to 22,000 lbs steer axles or FSD16 front drive axles
 - Automatic slack adjusters & outboard mounted brake drums
- Dust Shields, CAM and air disk brakes, front axle

REAR AXLE EQUIPMENT

- Dana Spicer D46-170 46,000 lb
 - Interaxle diff lock air rocker occupies space of one gauge
 - Laser factory axle alignment to improve handling and reduce tire wear
 - Magnetic rear axle oil drain plug
 - Parking brakes on all axles for optimal performance
 - Cognis EMGUARD FE 75W-90 synthetic axle lube
- PHP10 Iron LMS Hub
 - 11 ¼" bolt circle
 - Includes supplier extended coverage up to 3 years/350,000 miles for bearings and seals
- Parking brakes (axle package)
- Bendix Smart ATC Traction Control
- Refuse service brakes, all axles
- Rear brake camshaft reinforcement
- Heavy wall, drive axle(s)
- SBM Valve
 - Full trucks require a spring brake modulation (SBM) system for emergency braking application
 - This system requires an SBM valve and relay valve with spring brakes on the rear axles
 - The SBM valve allows the foot valve to operate the rear axle spring brakes if failure results in the rear air system
- Anti-lock Braking System (ABS) 6S6M
 - ABS-6
 - Includes air braking system

- Bendix Air Cam Rear Drum Brakes 16.5 x 7
 - Includes automatic slack adjusters and outboard mounted brake drums
- Ratio 4.78 Rear Axle
- Hendrickson Haulmaax HMX460 46,000 lbs, 54" AS

ENGINE AND EQUIPMENT

- ISL9 380/1900 1250@1400
 - (2010 emissions) Includes aluminum flywheel housing
 - Chevron Delo LE SAE 15W40 engine oil
 - Magnetic engine oil drain plug captures and holds any metal fragments in engine oil to extend service life
 - N20300 P029 No....Idle shutdown enable
 - N20380 P001 69....Max speed in top gear
 - N20400 P059 69....Maximum cruise speed
 - N20440 P030 5.....Idle shutdown timer
- Remote PTO and throttle position
- 160 AMP alternator, brushed
 - 12 volt system with circuit protection for reliable, easy maintenance and service
 - Weather pack silicone sealed electrical chassis connectors
 - Wires numbered every 4" or less
- Immersion type pre-heater 110-120V – Phillips
- 12V starter
- (3) premium 12V dual purpose batteries 2100 CCA
 - Threaded stud type terminal
 - Stranded copper battery cables are double aught (00) or larger to reduce resistance
- Big switch battery disconnect – mounted on battery box
- 2-speed fan clutch for frequent start/stops
- 18.7 CFM Air Compressor
 - Furnished on engine
 - Teflon lined stainless steel braided compressor discharge line
- Fuel filter, unheated with water in fuel (WIF) sensor
- Engine Protection Shutdown

- Includes oil pressure, oil temperature, coolant temperature and intake manifold temperature
- High-efficiency Cooling System
 - Silicone radiator and heater hoses
 - Constant tension band clamps
 - ClimaTech extended life coolant
 - Antifreeze effective to -30 degrees
 - Low coolant level sensor warns of low coolant condition to prevent engine damage
- Radial seal, dry type air cleaner, frontal
 - Air intake
 - Molded rubber air intake connections with lined stainless steel clamps seal to prevent contaminants in air intake
- Exhaust single RH side of cab
 - DPF/SCR RH under cab
 - Includes cab entry RH under cab and full round stainless steel exhaust guard
- Curved-tip Standpipe(s)
- 24" Ht, 5" dia chrome, clear coat standpipe

TRANSMISSION AND EQUIPMENT

- Allison 4500 RDS-P Rugged Duty Series
 - Includes rear transmission support, TranSynd transmission fluid and water oil heat exchange
 - Include new features that monitor the transmission fluid, filter and clutch condition
 - Display percent life remaining for transmission fluid, filter and clutches on the shift selector
 - This information may be displayed using the mode and up and down buttons
 - A wrench icon will also be included to indicate when the transmission fluid, filter and clutches need servicing
- 1760 HD Driveline, two mid-ship bearings
- Allison RDS Auto Neutral AK
 - Allison group 106, vocation package 170
 - Single steer, LH
- Dash mounted push button shifter
- Allison 5-speed Configuration – Wide Ratio Gears
 - Allison 4500 transmission only
- Allison Load Based Shift Schedule – (LBSS)

AIR AND TRAILER EQUIPMENT

- Bendix AD-IS EP Air Dryer with Heater
 - Extended purge (for use with higher air consumption)
 - An integrated system air dryer that incorporates the functions of the air dryer purge reservoir (which increases the drying capacity)
 - Wet air tank
 - Pressure relief valve
 - Single check valves and pressure protection valve for air susp and other air accessories
 - Includes easy to service spin-on dessicant cartridge
- Berg pull cord drain valve(s), all air tanks
- Nylon chassis hose
- Air system diagram, shipped loose
- Steel Painted Air Tanks
 - All air tanks are steel with painted finish
- Clear Outside Frame of All Air System Components – LH BOC
- Clear Outside Frame of All Air System Components – RH BOC
- Body Connections 5ft BOC
 - Junction box contains light and power circuits for body connectors
 - Located 5' from BOC
- Route air and electrical lines to allow welding of sub-frame to top-frame, 8" forward of BOC to EOF

TIRES AND WHEELS

- FF: BR 20 PLY 315/80R22.5 M860
- RR: BR 16 PLY 11R22.5 M711
- Tire rear qty: 8
- FF: ACCUR 29039 PLT 22.5 X 9.00 STL WHL (PILOT MOUNT, 10,000 lb load rating per wheel)
- RR: ACCUR 50408 PLT 22.5 X 8.25 STL WHL (PILOT MOUNT, two hand holes, 7,400 lb load rating per wheel)
- Rear rim qty: 8

FUEL TANKS

- 23" Aluminum 70 gallon fuel tank LH BOC addl
 - Paddle handle filler cap with threadless filler neck
 - Top draw fuel plumbing reduces chance of introducing air into the fuel system during low fuel level conditions due to the central placement of fuel pickup tube
 - Wire braid fuel lines
- Fuel cooler
- DEF tank mounted LH BOC

BATTERY BOX AND BUMPER

- Aluminum battery box LH under cab, non-slip step
 - Includes diamond pattern block shaped cover in traditional/vocational models and a smooth finish tapered cover on aerodynamic models
- Rubber Battery Pad in Bottom of (1) Battery Box (Mat in box that holds batteries only)
- Heavy duty battery box step reinforcement
- Aluminum channel bumper stainless steel clad
- After treatment aluminum DPF cab entry RH under cab – nonslip
-

CAB AND EQUIPMENT

- Aluminum cab 110" BBC Metton hood
 - Huck bolted cab construction
 - Stainless steel piano style door hinges
 - Bright finish crown
 - View window RH door and convex mirror over RH door
 - All aluminum cab, cab structure inside and out
 - Aluminum side skins, aluminum rear skin, steel windshield mask, steel firewall, steel front floor sheets on all cabs, additional reinforcement structure on the back wall of the day cab
 - Thick, closed-cell foam in floor, special mylar-faced foam in walls and roof structure
 - Rubber fender lips, 2-inch wide
 - Ultra ride drivers seat
 - (2) person passenger seat
 - Drivers armrest, RH only
 - Black seat
 - Seat belt color – orange
 - Driver seat - air ride, high back, vinyl
 - Passenger – non-air ride, low back, vinyl
 - Adjustable steering column – tilt/telescopic
 - Steering wheel
 - Interior – gray/black including; rugged charcoal instrument panels, glare resistant gray dash, black bezels on gauges, (2) power ports, monochromatic molded door pads with durable in-mold color, gray molded back wall, 18" 4-spoke soft touch steering wheel soft touch steering column cover, power lift passenger window, extruded rubber floor covering, header-mounted dome light, foot well lighting, integrated "dead pedal", (4) inside entry grab handles, (2) inside sun visors, (2) coat hooks, (2) cup holders and map bin in dash
 - Extended rear window
 - Day cab rear window
 - One piece curved windshield
 - Combo fresh air heater/air conditioner
 - Outside sun visor – stainless steel
 - Stainless steel mirrors, 7 x 16 with heat element
 - (2) convex 8" stainless steel mirror
 - Power door locks and windows
 - (1) Air horn 24.5" chrome – round with horn shield
 - (2) standard speakers
 - ConcertClass w/CD
 - Plug-in auto reset circuit breaker
 - Electric windshield wipers
 - Triangle reflector kit
 - 5lb 3A:40bc fire extinguisher cab mounted
 - Backup alarm – 107db
 - Air restriction indicator
 - (2) additional electric switches w/o wiring

- Main instrumentation panel w/graphics display
 - Includes speedometer with trip odometer, tachometer with hour meter and outside air temperature display, voltmeter, engine oil pressure, engine coolant temperature, fuel level, primary and secondary air pressure gauges.
 - Includes standard warning light package, high water temperature, low oil pressure, low air pressure warning lights w/audible alarms, high beam, turn signal, low fuel, parking brake, ice warning indicators, seat belt reminder, rocker switches with long life LED indicators, multifunction turn stalk with flash-to-pass feature (night mode flashes headlights and markers; day mode headlights only), intermittent windshield wiper and headlamp beam control.
- Dual output sensors for road and engine speed – terminals routed to BOC
- Headlights composite fender mounted
- (5) marker lights, Aero LED
- Two-way radio, Motorola XPR5350 or equivalent, narrowbanded
- **Must be able to seat 3 people in cab with seatbelts**

PAINT

- (1) color Dupont two stage – cab/hood
 - Base coat/clear coat
 - Cab – white
 - Frame – black
 - Wheels – white

WARRANTY/COVERAGE

- PACCAR 2013 PX-9 Protection Plan 1 (5/250)
 - Five years/250,000 miles
 - Coverage is 100 percent parts and labor with no deductibles on internally lubricated components and major engine systems including turbo charger, water pump and fuel injectors
- PACCAR 2013 PX-9 Aftertreatment Coverage (5/250)
 - Five years/250,000 miles
 - Coverage is 100 percent parts and labor with no deductibles on DEF controller, dosing unit, dosing valve, SCR catalyst, catalytic converter particulate filter, SCR/DPF temperature sensor interface module and other related aftertreatment parts as detailed in Cummins bulletin#3381446

It is the intent of these specifications to describe the minimum requirements for a refuse collection body of rear loading design. The capacity of said body shall be 31 cubic yards exclusive of any loading area. Capacity shall be determined by measuring all available void storage area from the face of the ejector panel in its most forward position in the body rearward to the face of the packer panel in its most forward position.

The omission of any standard feature description shall not alleviate the bidder from the responsibility of furnishing a complete body with all standard equipment of the manufacturer's latest improved model in current production as offered to commercial trade. The body shall conform in strength, quality of material and workmanship to that provided by the best manufacturing and engineering practices of the industry.

It is required that the units, as specified herein, shall be completely assembled and adjusted and that all equipment, including standard and optional equipment, be installed on a chassis furnished by others and the unit made ready for continuous operation.

As it is our desire to buy American, bidders using components or parts of other than American manufacture shall so state in their bid.

The bidder shall represent by his bid that all equipment to be furnished under this bid is new and unused.

All bidders shall attach a statement that the unit offered meets these specifications exactly, or list any exceptions fully and accurately.

The following bid specifications are the minimum acceptable specifications, based on economy and usability.

SPECIFICATIONS AND STANDARDS (YES) (NO)

When factory-priced literature, submitted to support the bid, does not indicate compliance with the specifications and your company can meet these specifications by modifications, you must so state in writing that you can meet the specifications and the necessary modifications be listed. Such writing must be submitted at bid opening time as part of your bid. Bidders must state make and model number of the unit they are offering. Bids submitted shall be on the latest current model of equipment meeting specifications.

GENERAL (YES NO)

- Refuse body to be a minimum 31 cubic yard capacity, exclusive of any loading area.
- Hopper shall have a capacity of 3 cubic yards.
- Refuse body capable of packing an average of 1,000+ pounds per cubic yard based on average household refuse.
- Refuse body must meet all applicable standards.

BODY CONSTRUCTION (YES NO)

- Roof shall be constructed of 10 gauge 50,000 PSI yield steel and shall be curved without use of crossmembers. Roof seams to be full welded.
- Side Sheets - Minimum 10 gauge 100,000 PSI yield steel and shall be curved without the use of crossmembers.
- Floor - Minimum 7 ga. 50,000 PSI yield steel. Floor shall be flat throughout, troughs or valleys are not acceptable.
- Two (2) "V" type longitudinals formed of 10 ga. 50,000 psi yield steel, internally gusseted, shall be provided for the full length of the body. "V" type longitudinals shall provide superior floor support, without the use of crossmembers. Longitudinals shall be 7 ½" high with 12 3/16" of the width at the floor sheet and 3" of width at the truck frame.
- Top rail and rub rail shall be formed channel 6" x 3 3/8" minimum of 12 gauge 50,000 psi yield steel and shall be fully welded to body sides. Top of leg braces shall be tapered to shed elements and eliminate rust pockets.
- Rear body corner post shall be 3/16" 50,000 psi yield steel, 4 5/8" x 6" and internally gusseted.
- Front body corner post shall be 10 ga 50,000 psi yield steel formed box section.
- Body shall be adequately braced at all points to withstand repeated applications of maximum packing pressures without distortion of members.

BODY DIMENSIONS (YES NO)

- Inside height no less than 80"
- Outside height no more than 90 ¼" above chassis rails, exclusive of body risers
- Inside width no less than 91"
- Outside width shall be no more than 96".
- Overall length of body: 31 yd. Body 312"

HOPPER DIMENSIONS (YES NO)

- Hopper capacity minimum of 3 cubic yards, (TBEA rating). Hoppers with factory or vendor build ups to achieve greater capacity will not be considered.
- Loading height up to 5 ½" below chassis frame height.
- Inside hopper minimum 80".
- Loading opening minimum 80" wide x 58" high.

TAILGATE CONSTRUCTION (YES NO)

- Hopper sides lower, minimum ¼" 100,000 PSI yield tensile steel. Upper sides, 7 ga 50,000 PSI yield steel. The sides shall be free of tracks, slots or openings of any kind.
- Tailgate side reinforcements shall consist of 6 3/16" x 4 7/16", 3/16" 50,000 psi yield and 6" x 4 7/16", 12 ga 50,000 psi yield formed steel channels fully welded to the perimeter of the tailgate side sheets. Additional tailgate side reinforcement from 6" x 4" channel braces formed from 10 ga and 12 ga 50,000psi yield steel.
- The hopper floor and hopper sill shall be a minimum of ¼" AR400 155,000 psi yield steel. Forward are of the hopper floor to have 10" x 80" x ¼" AR400 155,000 psi yield liner plate. Hopper load sill to be reinforced by ¼" 50,000 psi yield formed box section 7 ½" x 4.
- Tailgate shall be securely hinged to body at roof line using heavy duty flame cut hinges. It shall be raised for load ejection by two (2) 3" ID double-acting hydraulic cylinders.
- Tailgate shall be equipped with automatic tailgate locks. Lock/unlock controlled by activation of a single control lever located on the left front of body next to the ejector panel control. Use of manual screw clamps or turn buckles to secure tailgate are not acceptable.

- An extruded rubber gasket shall be securely affixed to the tailgate to provide a watertight seal between the body and the tailgate 48 ½" up each side minimum. Seal must be installed on the tailgate.
- The tailgate must be equipped with a tailgate ajar switch with a light fixed in the cab and an external audible alarm, which complies with the ANSI standards to warn driver when the tailgate is partially opened.
- Bolt-on steps are to be provided on each side of the tailgate, with grab handles located conveniently. The steps must be made out of grip strut open grate material, which will comply with ANSI standards.

PACKING MECHANISM (YES NO)

- Packing controls shall be mechanical lever operated. The packing control handles must be dual levers and must be able to reverse the packing mechanism at any position in the cycle or stop any movement of the packing panel by returning the control levers to their neutral position.
- Controls for the packer mechanism shall be located at the curbside of the hopper opening. The controls shall be manually operated. Control valve shall be externally located on the curbside hopper wall. Control handle linkage will be attached directly to the valve spools without the use of bell cranks or other linkage.
- The total packing cycle time to be a maximum 28 to 30 seconds. Operator reload time shall be no greater than 10 to 12 seconds.
- The packing mechanism shall consist of two (2) primary structures; the sliding fallback shield and the packing panel.
 - * **Sliding Fallback Shield**
 - The sliding fallback shield shall be free floating design. Mechanisms incorporation slots, rollers, slide blocks or external link arms are not acceptable.
 - The sliding fallback shield face plate shall be constructed from 3/16" 50,000 psi yield reinforced with formed channel members fabricated from 3/16" 50,000 psi yield steel. Side plates shall be fabricated from 3/16" 50,000 psi yield steel.
 - * **Packing Panel**
 - Packing panel shall be of the free floating design. Mechanisms incorporation slots, rollers, slide blocks or external link arms are not acceptable.
 - The packing panel face plate shall be constructed of 7 ga 50,000 PSI yield steel. Packing edge ¼" 50,000 PSI yield wear plate backed by 6" x 4" x ¼" wall rectangular tube. Reinforced by five (5) 6" x 4 7/16" formed channels of 3/16" 50,000 psi yield steel.
 - Packing cylinders shall generate 99,000 pounds of packing force.

- Packing cylinders are to be 5 1/2" I.D. double-acting cylinders. Sweep cylinders are to be 4" I.D. double acting hydraulic cylinders.
- When the packing mechanism reaches the rear most position, the packer must stop approximately 14" above the loading sill to avoid a pinching action. The packing control handles must then be reactivated to complete the cycle.
- The packing blade is to compact material into the body against the eject panel for a tighter, denser load.

EJECTION SYSTEM (YES NO)

- Unloading shall be by ejection method with a telescopic cylinder operating the ejector panel the full length of the body. A trough in the floor will not be acceptable.
- Ejector panel shall be powered by a double-acting, telescopic hydraulic cylinder.
- The ejector panel must be designed to act as a bulkhead against which refuse is compressed by the packing panel.
- The ejector panel face to be 7 gauge 50,000 PSI yield steel reinforced with 12 gauge 50,000 PSI yield steel gussets and 4" x 3" x 3/16" wall rectangular tubes. Panel lower face shall be 1/4" angle 50,000 PSI yield steel boxed with 1/4" angle 50,000 PSI yield steel.
- Ejector panel is to travel the full length of the body in floor level tracks and be equal in area to the cross section dimensions of the body.
- Ejector panel shall travel on two (2) steel guide tubes 3" x 5" x 1/4" wall x 41-1/4" long in floor level tracks at the inside corners of the floor and side wall. Ejector blade tracks to be 6" @ 12# ship channel, reinforced. Ejector panel tracks that are an integral part of the body floor or tracks that are in a trough below floor level are not acceptable.
- The ejector panel shall have no protrusions so that in its rearmost position it will not be damaged if the tailgate is closed with the panel fully rearward.

HYDRAULIC SYSTEM (YES NO)

A complete hydraulic system shall be provided.

- Hydraulic pump is to be 27GPM at 1200 RPM minimum and shall have a minimum 2200 PSI working pressure.
- A factory sealed relief valve set at a maximum of 2200 PSI is to protect all components from excessive pressure.

- The hydraulic reservoir must have a capacity of not less than 37 gallons and be located streetside, mounted inside the lower front of the body.
- The hydraulic reservoir shall be equipped with a filter breather, clean out cover, oil sight gauge and shut off gate valve in the suction line.
- The hydraulic system shall be protected by a 10 micron return line filter with a visual indicator and a 100 mesh reusable suction line strainer.
- All high pressure hydraulic tube must be corrosion protected using Zinc Di-Chromate plating and clamped using bolt on molded clamps. All high pressure hoses shall have a protective nylon sock and designed to withstand four (4) times working system pressure.
- The hydraulic system shall contain the following cylinders. All cylinders are to have "V" type packing.
 - Two (2) packing cylinders, cushioned, 5 1/2" I.D. double-acting with 2 1/2" chrome plated rods and a stroke of 38"
 - Two (2) sweep cylinders, 4" I.D. double-acting with 2 1/2" hardened chrome-plated rods with a stroke of 25"
 - One (1) ejection cylinder, 31 yard body – 7 1/2", 4 stage DA telescopic, 168" stroke
 - Two (2) tailgate lift cylinders, 3" double-acting with 2" chrome-plated rods and a stroke of 31"
- Two manually operated control valve assemblies must be provided with sufficient capacity to operate all hydraulic components. A regeneration valve is to be used to increase the speed of the packing cylinder. Front control valve shall be two (2) spool sectional type. Rear control valve shall be three (3) spool sectional type with a third spool for use with optional container handling devices.
- For ease of service, the hydraulic valve assemblies, including relief valve, must be located so that at no time or load condition will it be necessary to remove the load in order to obtain access to the valve assemblies.

LUBRICATION

- All packing wear points to be equipped with grease fittings.

LIGHTING

- All body lighting and reflectors shall comply with DOT and FMVSS #108 regulations.

- Wiring harness in round convoluted soft conduit to be provided. Wiring harness to be color coded and numbered, with automotive type plug-in connectors.
- Light package to include:
 - Two (2) 4" high mount stop/tail
 - Two (2) 4" high mount tail/turn
 - Two (2) 4" mid body turn signals (one each side)
 - Two (2) 2 1/4" oval low mount stop/tail
 - Two (2) 2 1/4" oval low mount turn/tail
 - Two (2) 4" high mount amber flashing lights
 - One (1) 4" low mount back up light
 - One (1) license plate lights
 - One (1) center mount brake light
- For long life and ease of service, all clearance, tail, stop and back-up lights shall be plug-in type, grommet mounted, shock resistant, waterproof, with Lexan lens. They shall be Truck-Lite or approved equal.

CAMERA AND TWO-WAY SOUND SYSTEM (YES NO)

- Intec Monitor Model CVM500
- Intec Camera Model CVC220SH
- Intec Cable Model CVCP18M with swivel
- Intec Back-Talk System including hand held speaker microphone with external speaker microphone installed at rear of body

PAINTING (Yes No)

- Body to be cleaned, deburred, weld spatter and slag removed prior to multi-stage chemical treatment/high pressure wash
- Powder coat primer and finish coat to assure a long-lasting durable paint system with excellent adhesion and ultraviolet protection
- In order to assure complete coverage, the major assemblies to be painted prior to assembly
- Dry film thickness is to be a minimum 4 to 6 mils thickness
- Paint to be baked at 325° until fully cured
- Paint must pass minimum 1250 hours salt spray test for corrosion resistance
- Paint must pass UV test of 2000 hours for minimum loss of gloss and color shift

- Hydraulic cylinders and valves to be painted semi-gloss black
- Hose ends and hydraulic fittings to be anodized and remain unpainted
- Hydraulic tubing to be zinc dichromate plated and unpainted
- Electrical harnesses, connections, switches, pneumatic tubing and fittings to be weatherproof and remain unpainted
- Ejection panel painted white
- Plated pivot pins
- Undercoated underbody
- Finished coat color to be white

MOUNTING (YES NO)

- The body installation shall be completed by the manufacturer or a factory authorized distributor
- Mounting shall be chassis and body manufacturer's engineering specifications

*******SPECIAL REQUIREMENT (YES NO)*******

- *Must be equipped with a 14,000 lb. or greater reeving cylinder winch.*

TRAINING (YES NO)

- The successful bidder will provide a trained technician, at no additional cost to the City, for a minimum 1-work day, to demonstrate the operational and maintenance aspects to operators and mechanics at the Public Works Garage.

WARRANTY (YES NO)

- The body and hydraulics shall be covered by a minimum of one year
- Complete coverage for one (1) year or more.

CHASSIS REQUIREMENTS (YES NO)

- Chassis must be equipped with diesel engine and requires variable speed governor
- Specifications listed are intended as general guidelines only. Each chassis selection should be made on an analysis of the weight distribution for the particular chassis/packer combination in question, including optional equipment and anticipated payloads.

31 Yard

| | |
|---------------------------|-------------|
| Cab Trunnion T/A (in.) | 190"-196" |
| Clear Frame Length (in.) | 244" |
| Minimum GVWR Front (lbs.) | 18,000# |
| Minimum GVWR Rear (lbs.) | 44,000# T/A |
| Minimum After Frame (in.) | 44" T/A |

SILENCE OF SPECIFICATION (YES NO)

The apparent silence of this specification and any supplemental specification as to any details or the omission from it of a detailed description concerning any point shall be regarded as meaning that only the best commercial practices are to prevail and that only material of first quality and correct type, size and design are to be used. All workmanship is to be first quality. All interpretations of this specification shall be made upon the basis of this statement.

DELIVERY (YES NO)

Delivery to the City of Warwick Public Works Department, 925 Sandy Lane, Warwick, RI 02889 to be 45 days after receipt of cab and chassis. The vehicles should be completed and ready to use upon delivery.

The purchase order for the truck bodies will be issued 90 days prior to expected delivery of cab and chassis.

CITY OF WARWICK

BID AND CONTRACT FORM

TITLE OF SPECIFICATION:

Bid2017-171 Purchase (1) Rear Loading Sanitation Vehicle

I. BID:

WHEREAS, the CITY OF WARWICK has duly asked for bids for performance of services and/or supply of goods in accordance with the above-indicated specifications.

The person or entity below does irrevocably offer to perform the services and/or furnish the goods in accordance with the specifications, which are hereby incorporated by reference in exchange for the bid price below;

This offer shall remain open and irrevocable until the CITY OF WARWICK has accepted this bid or another bid on the specifications or abandoned the project.

The bidder agrees that acceptance below by the CITY OF WARWICK shall transform the bid into a contract. This bid and contract shall be secured by Bonds, if required by the specifications.

Pricing as Follows

Bid2017-171 Purchase (1) Rear Loading Sanitation Vehicle

| Description | Bid |
|--|------------|
| I. Cab & Chassis | |
| | |
| Year | |
| | |
| Make | |
| | |
| Model | |
| | |
| Warranty | |
| | |
| TOTAL COST FOR 1 VEHICLE | \$ |
| | |
| | |
| II. Option | |
| | |
| 1. 2-way radio, Motorola XPR-5350 or equivalent, narrowbanded (EACH) | \$ |
| | |
| TOTAL COST 1 VEHICLE WITH OPTION | \$ |
| | |
| Delivery in Calendar Days ARO | |